

Broadway Bridge
Spanning Cherry Creek on Broadway
at Speer Boulevard
Denver
Denver County
Colorado

HAER No. CO-48

HAER
COLO,
16-DENV,
46-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

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Location: Spanning Cherry Creek on Broadway Avenue at Speer
Boulevard in Denver, Denver County, Colorado

UTM: 13.501230.4397145
Quad: Englewood

Date of Construction: 1896

Present Owner: City of Denver
City Hall
1437 Bannock Street
Denver, Colorado 70202

Original Use: Roadway/tramway bridge

Present Use: Pedestrian and vehicular bridge, to be replaced by a
new vehicular bridge. Projected date for removal is
Summer 1987.

Significance: The Broadway Bridge is technologically significant as
the only vehicular bridge in Colorado of open-web deck
girder type. It is historically significant as one of
the last remaining 19th century bridges built by the
city of Denver and the Denver Tramway Company to serve
vehicular and streetcar traffic.

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The Broadway Bridge

The Broadway Bridge over Cherry Creek was built by the city of Denver and the Denver Tramway Company between 1895 and 1896. The 129-foot open-web deck girder bridge was originally built to serve pedestrian, vehicular and streetcar traffic and remains in use today as a vehicular and pedestrian bridge. The structure features latticed outside girders which arch from a 14' 3" depth at the abutment to an 8' 3" depth at midspan and four interior solid plate girders 10' deep with angle flanges and web stiffeners. As the only vehicular bridge of this type in Colorado, and as one of the last remaining 19th century spans associated with the Denver Tramway Company, the Broadway Bridge is both technologically and historically significant.

While other companies were failing, the Denver Tramway Company directed its post-Depression efforts to the reconstruction of its acquired and existing lines. Among the original branch lines, 15th Street and Broadway were particularly in need of attention, with both the city government and area property owners urging the relocation of the old tracks to the center of the streets. The tramway company rapidly implemented the 15th Street improvement, but chose to delay the Broadway relocation because of the extremely poor street grade, deferring to the city for the necessary improvements. On another urgent Broadway improvement, the construction of a new bridge across Cherry Creek, tramway and Denver officials came to a more expedient arranging, agreeing to a jointly-funded enterprise.

The proposed structure was the last of a series of bridges built at the Broadway crossing of Cherry Creek during the late 1800s. The city had originally bridge the creek at Broadway with a timber structure about 1870. Frequent flooding during the next few years required the repeated reconstruction of this span. In 1882, a new \$25,000 Broadway Bridge (presumably steel) was constructed as a joint project by the city of Denver and Arapahoe County. While this structure remedied the problem of flooding repairs, it failed to meet the rapidly escalating demands of city traffic. In 1895, Arapahoe County began the widening of South Broadway, leading to the subsequently proposal for yet another Cherry Creek Bridge.

Early in 1895, the city of Denver let competitive bids for the construction of the present Broadway Bridge, calling for a structure with a 60-foot roadway to allow for the anticipated widening of the thoroughfare. The proposal attracted bids from ten major regional and national firms: the Youngstown [Ohio] Bridge Company, King Bridge Company, Wrought Iron Bridge Company, Pittsburgh Bridge Company, Bullen Construction Company, American Bridge Works, Pennsylvania Bridge Company, Fowsen & Blodgett, Mississippi Valley Bridge & Iron Works and the Toledo Bridge Company. In March, the city reviewed bids and awarded the steel contract to the Youngstown Bridge Company, who bid low at \$29,500.¹ A separate contract for the masonry substructure was awarded shortly thereafter (the specific contractor is not known).

Construction of the stone abutments commenced in the spring of 1895 and, after some delay, the superstructure was completed in April 1896. Built at a cost of \$62,377, it was the most expensive bridge undertaken by the Public Works Department up to that time.² The 129-foot span was further remarkable for its design, featuring outside latticed girders of an arched configuration and inside plate girders. Its 100-foot curb-to-curb width was divided into a 60-foot roadway for vehicular and tramway traffic and two 20-foot sidewalks on either side of the roadway. The gross weight of steel and iron used in the structure totaled nearly 880,000 pounds.

Like many major bridges of the period, the Broadway Bridge was built with both a functional and decorative intent - the heavy girders provided the strength required at this heavily-used crossing; the arched configuration reflected the Victorian aesthetic of bridge design. Further embellished with cast iron railing and lampposts along either side of the span, it represented a symbol of prosperity that the entire community could regard with pride.

To Broadway property owners, the new bridge was especially meaningful, for it brought renewed interest in real estate development in the area and a greater urgency for the completion of Broadway street improvements. In 1898, Denver Tramway Company President Rodney Curtis approached the South Side Improvement Association, a group of Broadway property owners, with an offer to rebuild the street and relocate the railway tracks from 9th Avenue to the Alaska Street terminal (such work had already been completed from Colfax to 9th Avenue).³ Although the association responded favorably, the approval of the City Council caused a long and contentious delay. The spreading development south of the Broadway Bridge comprised a particularly sensitive point in the argument:

There is no more beautiful or desirable residence section in Denver than that lying on either side of Broadway beyond Cherry Creek. It has been the scene of unprecedented activity in building during the past year [1898] and the outlook for the present year is very flattering. A large percentage of the people own the houses in which they live and desire to beautify them as much as possible. It is therefore the more necessary that some agreement should be reached by which the work can proceed without further delay.⁴

The Denver Tramway Company

The development of the Denver street railway system had its beginnings in 1871, when the Denver City Horse Railroad Company built the first horsecar line in the city. Originally incorporated in 1867, the company was granted exclusive rights to horse railroads within the city of Denver and its additions.⁵ Sold to a Chicago capitalist in 1871, the franchise went from total inactivity to a rapidly developed rail network known as the Denver City Railway.

By 1874, the Denver City Railway Company had four horsecar lines in operation, a Champa Street branch between 7th and Larimer and 27th streets, a North Denver branch on 15th Street, a Broadway branch running from Larimer Street out 16th Street and Broadway to Cherry Creek, and a Park Avenue and 23rd Street branch.⁶ Line trackage gradually increased until 1883, when the 15-1/2 mile system was sold to a Providence, Rhode Island, syndicate.

The new management of the Denver City Railway showed no immediate interest in a major expansion of the system, making only short extensions to the existing lines during the first two years. The minute efforts of the railway's absentee owners fell vastly short of the burgeoning city's needs and led to the inevitable formation of a local competitor.

During the mid-1880s, Denver's central business district underwent a boom period of expansion, and property owners began to press for expanded and improved transportation. To address this need, former Colorado governor and railroad tycoon, John Evans, and a group of 15th Street business owners, formed the Denver Electric & Cable Company in 1885. That organization was incorporated for the purpose of constructing and operating electric and cable railways on streets not occupied by the Denver City Railway. A subsidiary company, the Denver Railway Association, was organized at the same time for running horsecar lines, but the two were consolidated shortly thereafter as the Denver Tramway Company.

In June 1886, the Denver Tramway Company inaugurated a three-mile electric line along 15th Street, utilizing a current pick-up system pioneered by Professor Sidney H. Short of the University of Denver. Only the second electric railway line in the country (the first was introduced in Kansas City⁷), it proved a troublesome and unprofitable investment and was abandoned after a year of operation. The company subsequently returned to the old horsecar system, but a Denver court order upholding the exclusive rights held by the competing Denver City Railway Company for horse power, cut that venture short. That left the Tramway Company with one alternative motive power - the cable system.

In cities cross the country, cable railways proliferated as an economic and efficient mode of late 19th century urban transportation. Denver citizens were anxious for the installation of cable roads, and when the Denver Tramway Company began to contemplate its use, property owners in the vicinity of 15th Street, Colfax Avenue and Broadway offered a \$200,000 bonus for the construction of lines in those streets. Tramway officials accepted the offer and doubled their capital to \$1,000,000 in March 1888.⁸

The tramway company immediately hired Henry M. Lane of Cincinnati, Ohio, to install a three-line network, using the Cincinnati cable system (the San Francisco system constituted the other major method in use at the time). The three original branches, radiating from a powerhouse at Colfax and Broadway, extended south along Broadway to Alameda Avenue, east along Colfax Avenue to

Cleveland Place (Filmore Street) in the vicinity of City Park, and northwest along 15th Street to Fay (30th) Street. The company installed two tracks on each of these lines, one on either side of the Denver City Railway's existing double track roads on 15th Street and Broadway. As a result of the competitive laying of tracks, the rails frequently edged into the street gutters, and on Broadway, gave the street "the appearance of a huge grid iron."⁹

With the opening of the tramway company's new lines in December 1888, the rivalry between the two competitors grew fierce. The Denver City Railway reorganized the same year as the Denver City Cable Railway, obtaining a city franchise to use cable power on any of the streets not occupied by the Denver Tramway Company. The older company hastened the installation of several new cable lines and simultaneously extended its Broadway horsecar line south from Cherry Creek to Alameda Avenue to match the tramway's terminus. However, after a short period of negotiation, the railway companies reached an agreement, whereby the Denver City Cable Railway removed its tracks from the Broadway and 15th Street lines, leaving its competitor with sole control of the railway traffic there.

Only months after the installation of the original three-line system, the Denver Tramway Company initiated the construction of two new lines. The fourth line was located on 18th Avenue and featured two long loops, one on Lafayette and Humboldt Streets to 24th Avenue, and the other on Washington and Marion Streets to 26th Avenue. Unlike the nearly-straight lines previously built, the operation of the curved line proved to be extremely problematic. The Washington Street loop, for example, became immediately unworkable; excessive curvature and frequent derailments resulted in its removal after barely six weeks of functioning.¹⁰ Continuous problems finally led to the replacement of the 18th Avenue branch with an electric line on 19th Avenue in 1891.

The fifth line, a route down Lawrence Street to its intersection with 35th and Downing Streets, was extended only four blocks before the city of Denver intervened, objecting to the proposed electrification of the route. Although months of litigation held up construction, the final court verdict allowed the tramway company to complete its electric trolley line on Lawrence Street in 1890.

Meanwhile, the institution of the original three lines had attracted a surge of commercial and residential development, particularly along the extent of the Broadway line. Consequently, the tramway company began immediate improvements along that route. In 1889, the company leased two blocks of land at Broadway and Cherry Creek and established "Base Ball Park," a property in which they subsequently invested \$11,000 worth of improvements.¹¹ In addition, a new powerhouse and loop were constructed at Alaska Avenue (presently Alaska Place) and the line extended the two block distance from Alameda Avenue in 1890.

In order to expand beyond the Denver city limits, the tramway company formed two subsidiaries, the South Denver Cable Railway Company, incorporated in 1889 to build an extension of the Broadway line into the town of South Denver, and the Denver Tramway Extension Company, incorporated in 1890 to build a line on Ashland and Agate avenues into north Denver. Both companies were authorized to use cable or electric power, and officials were determined to give the newer and far superior Sprague electric system a try.¹² The electric trolley lines opened in 1889 and 1890, respectively, and their successful implementation led the Denver Tramway Company to the ultimate decision to switch all of its lines from cable to electric power.

Following the controversial electrification of the Lawrence Street line, the tramway management solicited the Denver City Council for an ordinance, passed on April 9, 1891, granting authority to convert all of its lines to electricity. Two years later, the company transferred its original three lines to electric power, effectively eliminating cable traction from its system.

The Silver Crash of 1893 ended Denver's boom period of street railway expansion and brought financial troubles to the overextended Denver City Cable Railway and smaller independents. The Denver Tramway Company, however, was able to use the depression to its advantage and enlarged its control of the city's street railways by acquiring smaller, insolvent lines. In 1899, the Denver City Cable Railway went into receivership, and that company and all of its subsidiaries were absorbed by a reorganized Denver City Tramway Company.

As the Broadway improvement controversy raged on, the tramway company was reaping the rewards of its long struggle for the control of Denver's street railway system. By the end of the 1890s, the company possessed a successful operation of over 100 miles of electric railway and held a virtual monopoly with the exception of the Denver, Lakewood & Golden Railroad Company.¹³ During the early 1900s, the company fulfilled its commitment to convert all of its acquired lines to electricity. In addition, many of its lines were improved and rerouted.

The long-awaited Broadway improvement was also implemented during those years. In fact, with the approval of a new city administration, the tramway company assumed the entire task of street reconstruction and track relocation on Broadway and completed the major part of the work by 1901.¹⁴ City officials and property owners were double pleased that the project had been accomplished largely at the expense of the railway company.

From the early 20th century to the present day, the Denver City Tramway Company underwent several periods of reorganization. Between 1914 and 1925, the firm reformed under its previous name, the Denver Tramway Company. In 1925, the company was consolidated with the Denver & Northwestern Railway Company and the Consolidated Securities & Investing Company to form the Denver Tramway

Corporation. It remained under this management until 1971, when the city of Denver acquired all tramway holdings through condemnation proceedings and changed the company name to Denver Metro Transit. Three years later, that organization became today's Regional Transportation District (R.T.D.).

The tramway system itself became quickly outdated during this century of modernized transportation. Following the conversion of its system from cable to electric trolley, the next major change was the introduction of trolley motor coaches in 1940. Over the next decade, the Tramway Corporation gradually phased out its outdated track lines. On June 4, 1950, the old iron-wheeled trolley system passed into history, and with it, the memory of Denver's marvelously prosperous tramway era.

FOOTNOTES

- 1 "Broadway Bridge Bids," Rocky Mountain News, March 27, 1895, p. 4.
- 2 "Denver has \$1,500,000 Invested in Bridges and Viaducts," Denver Municipal Facts, November 27, 1909, p. 5.
- 3 "This Looks Like Business," Denver Times, July 7, 1898, p. 8.
- 4 "Broadway Controversy," Denver Times, April 19, 1899, p. 4.
- 5 Clyde London King, The History of the Government of Denver, Denver: The Fisher Book Company, 1911, p. 64.
- 6 W. B. Vickers, History of the City of Denver, Chicago: O. L. Baskin & Co., 1880, p. 267.
- 7 King, p. 135.
- 8 Stanwood C. Griffith, Electric Railroads: Denver Tramways, Vol. 30, December 1961, p. 5.
- 9 Jerome C. Smiley, History of Denver, Vol. I, Denver: The Times-Sun Publishing Company, 1901, p. 859.
- 10 George W. Hilton, The Cable Car in America, Berkeley: Howell-North Books, 1971, p. 409.
- 11 Smiley, p. 862.
- 12 Griffith, p. 7.
- 13 Smiley, p. 866.
- 14 "Broadway Revival," Denver Times, June 10, 1901, p. 4.

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